

# Marathon Petroleum Company LP

1300 South Fort Street Detroit, MI 48217 Telephone 313/843-9100

#### VIA FEDERAL EXPRESS

January 17, 2013

Ms. Wilhemina McLemore, District Supervisor Michigan Department of Environmental Quality Air Quality Division 3058 W. Grand Boulevard Suite 2300 Detroit, MI 48202



Re: Continuous Emissions Monitoring System Reports for the Fourth Quarter 2012; Marathon Petroleum Company LP – Michigan Refining Division

Dear Ms. McLemore:

This report contains information and data related to continuous emissions monitoring systems (CEMS) at Marathon Petroleum Company LP's (MPC's) Michigan Refining Division (MRD) for the fourth quarter 2012. These reports are submitted pursuant to the General Provisions of the federal New Source Performance Standards (40 CFR 60.7) and Rule 1170 of the Michigan Air Pollution Control Rules. In addition, this report contains information required by the November 2005 First Revised Consent Decree, United States of America et. al. v. Marathon Ashland Petroleum LLC (presently known as Marathon Petroleum Company LP) (Civil Action No. 4:01CV-40119-PVG), as modified on March 31, 2008, June 30, 2010, and December 13, 2012. This report is divided into four attachments as follows:

Appendix A – CEMS downtime and excess emissions summary reports pursuant to 40 CFR 60.7(d) for all environmental analyzers at the Refinery. The CEMS did not exceed the 5% downtime limit. The East Plant SRU Thermal Oxidizer SO2 and the FCCU Regenerator CO exceeded the 1% excess emission limit.

**Appendix B** - New Source Performance Standards (NSPS) Subpart J Alternate Monitoring Plan (AMP) data for seven streams: (1) Alky Spent Caustic H2S, (2) CCR/SR Recycle H2 H2S, (3) DHT/Unifiner Recycle H2 H2S, (4) FCCU Disulfide off-gas H2S, (5) CP Spent Caustic Drum Vent H2S, (6) SR Aromatics Sump Vent H2S, and (7) CCR Chlorsorb Vent SO2.

The Refinery has five additional AMPs for which no data is being submitted: (1) The Crude Spent Caustic Drum was permanently shutdown, (2) The BT Recycle Hydrogen, which was part of the BT Platformer unit, was permanently shutdown in September 2005, (3) CCR Lockhopper Vent Gas which currently cannot physically be vented to the flare or fuel system, (4) Propylene Deethanizer off-gas, and (5) Alky Deethanizer off-gas were re-routed to a location that the refinery's fuel gas H2S analyzer will receive the streams.

All AMPs were obtained in accordance with the NSPS General Provisions (40 CFR §60.13(i)).

Appendix C – Data from cylinder gas audits performed on CEMS located on the exhaust of the B&W Boiler, CCR Interheater, CCR Charge Heater, East Plant H2S, FCC Charge Heater, FCCU Regenerator, GOHT Heater, West Plant H2S, and the Zurn Boiler. Relative Accuracy Test Audits (RATAs) were conducted on the Coker Charge Heater on December 11, 2012, the Crude/Vacuum Heater on December 6, 2012, the DHT Heater on December 12, 2012, the East Plant SRU Thermal Oxidizer on November 28, 2012, the FCC Charge Heater on December 19, 2012, the New Vacuum Heater on December 11, 2012, and the North Plant SRU Thermal Oxidizer on December 14, 2012.

**Appendix D** – Excess Emission Report for the East Plant SRU Thermal Oxidizer SO2 and the FCCU Regenerator CO exceedences of 1% excess emissions.

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information in Appendices A through D of this submittal is, to the best of my knowledge and belief, true, accurate, and complete. Please contact Tabetha Daum at (313) 297-4701 if you have any questions concerning this submittal.

Sincerely,

Marathon Petroleum Company LP

By: MPC Investment LLC, General Partner

Mr. C.T. Case, Deputy Assistant Secretary

#### Attachments

cc: Technical Programs Unit - MDEQ: AQD - c/o Karen Kajiya-Mills - Federal Express

Chief, Environmental Enforcement Section, Environment and Natural Resources Division, U.S. DOJ - Federal Express

U.S. EPA, Director of Air Enforcement Division c/o Matrix Environmental and Geotechnical-Federal Express

Air and Radiation Division, U.S. EPA Region 5 – Federal Express

Office of Regional Counsel, U.S. EPA Region 5 - Federal Express

# Appendix A

**CEMS Downtime and Excess Emissions Summary Reports** 

Pollutant: SO2 (NOx) CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: N/A

Reporting Quarter: Fourth 2012 Monitor Model: Limas 11 (NOx)

Facility: Marathon Petroleum Company LP Manufacturer: ABB

1300 South Fort Street

Detroit, MI 48217 Emission Limit: 0.05 lbs/MMBTU

Emission Unit: Alky Heater (NOx)

Average Time: annual rolling average

Total Operating Hours of Emission Unit: 1848 hrs

Emission Data Summary	-		1. Duration of CEM Downtime During Source Operation					
1. Duration of Excess Emissions								
A. Startup/Shutdown	0.00	hrs	A. Monitor Malfunction	0.00	hrs			
B. Control Equipment	0.00	hrs	B. Non- Monitor Malfunction	0.00	hrs			
C. Process Problems	0.00	hrs	C. QA Calibration	0.00	hrs			
D. Other Known Causes	0.00	hrs	D. Other Known Causes	4.00	hrs			
E. Unknown Causes	0.00	_hrs	E. Unknown Causes	0.00	hrs			
2. Total Duration	0.00	_hrs	2. Total Duration	4.00	hrs			
3. Percent of Total Excess Emissions	0.00_%		3. Percent of Total CEM Downtime	0.22	%			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	co	CO2	(02)	) TRS	H2S	HC1	Opacity	(Circle One	<b>)</b>	
Other: <u>I</u>	N/A	······································	<del></del>									
Reporting	Quarter:	Fourth	2012	<b>*</b> .		Monite	or Model:	Magnos	106 (O2)			
	Facility:	Marathor	n Petroleum	Compan	y LP	Manu	Manufacturer: ABB					
		1300 Sou	uth Fort Stre	eet								
		Detroit, N	11 48217			Emissi	on Limit:	none			· · · · · · · · · · · · · · · · · · ·	
Emiss	ion Unit:	Alky Hea	ter (O2)		Avera	ge Time:	none					
						Total Opera	tina Hour	s of Emis	sion Unit:	1848	hrs	

Emission Data Summary		CEM Performance Summary						
Duration of Excess Emissions		Duration of CEM Downtime During Source Operation						
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs				
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	0.00	hrs				
D. Other Known Causes	<u>0.00</u> hrs	D. Other Known Causes	4.00	hrs				
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	hrs				
2. Total Duration	hrs	2. Total Duration	4.00	hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.22	_%				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	02	TRS	H2S	HC1	Opacity	(Circle One)	
Other: N	V/A	<del>TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT</del>									
Reporting (	Quarter:	Fourth	2012			Monito	or Model:	URAS 14	(CO)		egy mán i en
Facility: Marathon Petroleum Company LP						Manufacturer: ABB					
		1300 Sou	uth Fort Stre	et							
		Detroit, N	M 48217			Emission Limit: 400 ppm* 0.028 lbs/MMBTU**					
Emissi	on Unit:	BW Boile	er (CO)	The second secon	- Tribulation of the same and t	Average Time: *24 hour average **annual rolling averag					
					To	otal Opera	tina Houn	s of Emis	sion Unit:	1958.5 hrs	te.

Emission Data Summary		CEM Performance Summary						
Duration of Excess Emissions		Duration of CEM Downtime During Source Operation						
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs				
B. Control Equipment	0.00_ hrs	B. Non- Monitor Malfunction	0.00	hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	1.00	hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs				
E. Unknown Causes	<u>0.00</u> hrs	E. Unknown Causes	0.00	 hrs				
2. Total Duration	0.00 hrs	2. Total Duration	5.00	hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.26	%				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time)  $\times$  100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant: S<sub>02</sub> CO CO<sub>2</sub> 02 TRS H<sub>2</sub>S HC1 Opacity (Circle One) Other: N/A Reporting Quarter: Fourth 2012 Monitor Model: Limas 11 (NOx) Facility: Marathon Petroleum Company LP Manufacturer: ABB 1300 South Fort Street Detroit, MI 48217 Emission Limit: 0.20 lbs/MMBTU\* 0.05 lbs/MMBTU\*\* Emission Unit: BW Boiler (NOx) Average Time: \*24 hour average \*\*annual rolling average

Total Operating Hours of Emission Unit: 1958.5 hrs

Emission Data Summary		CEM Performance Summary						
1. Duration of Excess Emissions		Duration of CEM Downtime During Source Operation						
A. Startup/Shutdown	0.00hrs	A. Monitor Malfunction	0.00 hrs					
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 hrs					
C. Process Problems	0.00 hrs	C. QA Calibration	1.00 hrs					
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs					
E. Unknown Causes	0.00hrs	E. Unknown Causes	0.00 hrs					
2. Total Duration	0.00 hrs	2. Total Duration	5.00 hrs					
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.26 %					

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	CO	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)	
Other: I	N/A	<del>70</del>									
Reporting	Quarter:	Fourth	2012	ж.		Monit	or Model:	Magnos	106 (O2)	The state of the s	
	Facility:	Marathor	n Petroleun	n Compan	y LP	Manufacturer: ABB					
		1300 Soi	uth Fort Str	eet							
		Detroit, N	/II 48217			Emiss	ion Limit:	none			
Emiss	ion Unit:	BW Boile	er (O2)			Avera	age Time:	none	***************************************		
					To	tal Onera	ting Hours	o of Emic	eian Linit:	1059 5 hrs	

Emission Data Summary		CEM Performance Summary						
Duration of Excess Emissions		Duration of CEM Downtime During Source Operation						
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs					
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 hrs					
C. Process Problems	0.00 hrs	C. QA Calibration	1.00 hrs					
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs					
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00 hrs					
2. Total Duration	0.00hrs	2. Total Duration	5.00 hrs					
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.26 %					

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant: S02 CO CO2 Opacity (Circle One) 02 TRS H2S HC1 Other: N/A Reporting Quarter: Fourth 2012 Monitor Model: Limas 11 (NOx) Facility: Marathon Petroleum Company LP Manufacturer: ABB 1300 South Fort Street Detroit, MI 48217 Emission Limit: 0.05 lbs/MMBTU Emission Unit: Coker Heater (NOx) Average Time: annual rolling average Total Operating Hours of Emission Unit: 1848 hrs

Emission Data Summary		CEM Performance Summary  1. Duration of CEM Downtime During Source Operation					
1. Duration of Excess Emissions							
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs			
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs			
C. Process Problems	0.00 hrs	C. QA Calibration	0.00	hrs			
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs			
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	hrs			
2. Total Duration	0.00 hrs	2. Total Duration	4.00	hrs			
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.20	%			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	O2	TRS	H2S	HC1	Opacity	(Circle One	)	
Other:	N/A											
Reporting	Quarter:	Fourth	2012			Monite	or Model:	Uras 26 (	co)		Notice and the second of the s	
	Facility:	Marathon	Petroleum	Company	LP	Manufacturer: ABB						
		***************************************	ith Fort Stre	et	and the second s	•						
		Detroit, M	11 48217			Emissi	ion Limit:	0.01 lbs/l	MBTU		· · · · · · · · · · · · · · · · · · ·	
Emiss	ion Unit:	Coker He	eater (CO)			Avera	age Time:	annual ro	lling averag	je	pizanonimakanima orani areassanima areassanim	
					T	otal Opera	tina Hour	s of Emis	sion Unit:	1848	hrs	

	1. Duration of CEM Downtime During Source Operation					
0.00 hrs	A. Monitor Malfunction	0.00 hrs				
0.00 hrs	B. Non- Monitor Malfunction	0.00hrs				
0.00 hrs	C. QA Calibration	<u>0.00</u> hrs				
0.00 hrs	D. Other Known Causes	4.00 hrs				
0.00 hrs	E. Unknown Causes	0.00 hrs				
0.00 hrs	2. Total Duration	4.00 hrs				
0.00 %	3. Percent of Total CEM Downtime	0.20 %				
	0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs	1. Duration of CEM Downtime During Science  0.00 hrs				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	co	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)		
Other:	N/A	and a second	ari									
Reporting	Quarter:	Fourth	2012			Monit	or Model:	Magnos	106 (O2)	······································		
Facility: Marathon Petroleum Company LP						Manufacturer: ABB						
		1300 Sou	uth Fort Stre	et								
		Detroit, N	11 48217	***************************************		Emission Limit: none						
Emiss	ion Unit:	Coker He	eater (O2)		Miraniski indistrija sama anatopia je meljebili d	Average Time: none						
					÷	Cotal Onera	tina Hour	s of Emis	sion linit	1848 hrs		

Emission Data Summary		CEM Performance Summary						
Duration of Excess Emissions		Duration of CEM Downtime During Sc	Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs				
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	0.00	hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs				
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	hrs				
2. Total Duration	0.00 hrs	2. Total Duration	4.00	hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.20	%				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	(NOx)	) co	CO2	02	TRS	H2S	HC1	Opacity	(Circle One	∌)
Other: 1	V/A		******								
Reporting	Quarter:	: Fourth	2012	<b>8</b> 04		Monit	or Model:	Limas 11	(NOx)		
	Facility:	: Marathor	n Petroleum	Company	LP	Manı	ufacturer:	ABB			
		1300 Soi	uth Fort Str	eet		_					
		Detroit, N	ЛI 48217	in a time was a real or a second seco		Emiss	ion Limit:	0.05 lbs/	MMBTU		
Emissi	ion Unit:	CCR Chi	arge Heate	(NOx)	and the state of t	Avera	age Time:	annual ro	olling avera	ge	
					T	otal Opera	tina Hour	s of Emis	sion Unit:	1848	hrs

Emission Data Summary		CEM Performance Summary  1. Duration of CEM Downtime During Source Operation					
Duration of Excess Emissions							
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs				
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	0.00 hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs				
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00 hrs				
2. Total Duration	0.00 hrs	2. Total Duration	4.00hrs				
3. Percent of Total Excess Emissions	0.00_%	3. Percent of Total CEM Downtime	0.22 %				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	O2	TRS	H2S	HC1	Opacity	(Circle One)	
Other: <u>I</u>	V/A	······································								,	
Reporting	Quarter:	Fourth	2012			Monito	or Model:	URAS 14	(CO)		
	Facility:	Marathor	n Petroleum	Company	LP	Manu	ıfacturer:	ABB			
		1300 So	uth Fort Stree	et							
		Detroit, N	/II 48217			Emissi	on Limit:	0.013 lbs	MMBTU		
Emissi	on Unit:	CCR Cha	arge Heater (	(CO)		Avera	ge Time:	annual ro	lling averag	Je .	
					То	tal Operat	ing Hours	of Emis	sion Unit:	1848 1	hrs

Emission Data Summary		CEM Performance Summar	У.				
Duration of Excess Emissions		Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs			
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs			
C. Process Problems	0.00 hrs	C. QA Calibration	0.00	hrs			
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs			
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	_ _hrs			
2. Total Duration	0.00hrs	2. Total Duration	4.00	_hrs			
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.22	_%			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	CO	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)	
Other: I	N/A		<del>ni</del> .								
Reporting	Quarter:	Fourth	2012			Monite	or Model:	Magnos	106 (O2)		
	Facility:	Marathor	Petroleum	Compar	ny LP	Manu	ufacturer:	ABB			
	19	1300 Sou	ith Fort Stre	et			~		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		araman.
	3	Detroit, N	11 48217	***************************************		Emissi	ion Limit:	none			
Emiss	ion Unit:	CCR Cha	rge Heater	(02)		Avera	nge Time:	none			
					Tot	al Opera	ting Hours	of Emis	sion Unit:	1848 hrs	

Emission Data Summary		CEM Performance Summary  1. Duration of CEM Downtime During Source Operation					
Duration of Excess Emissions							
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs				
B. Control Equipment	0.00hrs	B. Non- Monitor Malfunction	0.00 hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	0.00 hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs				
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00 hrs				
2. Total Duration	0.00hrs	2. Total Duration	4.00 hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.22 %				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

HC1 Opacity (Circle One) CO CO<sub>2</sub> TRS H<sub>2</sub>S Pollutant: **SO2** Other: N/A Monitor Model: Limas 11 (NOx) Reporting Quarter: Fourth 2012 Manufacturer: ABB Facility: Marathon Petroleum Company LP 1300 South Fort Street Emission Limit: 0.05 lbs/MMBTU Detroit, MI 48217 Average Time: annual rolling average Emission Unit: CCR Interheater (NOx)

Total Operating Hours of Emission Unit: \_\_\_\_1848 \_\_\_ hrs

Emission Data Summary		en market in the second area of the second	CEM Performance Summary					
Duration of Excess Emissions			Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown	0.00	nrs	A. Monitor Malfunction	0.00	_hrs			
B. Control Equipment	0.00	nrs	B. Non- Monitor Malfunction	0.00	_hrs			
C. Process Problems	0.00	nrs	C. QA Calibration	0.00	hrs			
D. Other Known Causes	0.00	hrs	D. Other Known Causes	4.00	hrs			
E. Unknown Causes	0.00	hrs	E. Unknown Causes	0.00	hrs			
2. Total Duration	0.00	hrs	2. Total Duration	4.00	hrs			
3. Percent of Total Excess Emissions	0.00	%	3. Percent of Total CEM Downtime	0.22	%			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	O2	TRS	H2S	HC1	Opacity	(Circle One)	
Other:	N/A	anteradional kine kilokulari kan ngapingay pipipingingay yang									
Reporting	Quarter:	Fourth	2012			Monito	or Model:	Uras 26 (	CO)		
	Facility:		n Petroleum		LP	Manu	facturer:	ABB			
		1300 Sou Detroit, M	uth Fort Stre 11 48217	et		Emissi	on Limit:	0.013 lbs	/MMBTU		White and a second seco
Emiss	ion Unit:	CCR Inte	rheater (CC	<b>)</b>		Avera	ge Time:	annual ro	lling avera	ge	
					To	otal Opera	ling Hour	s of Emis	sion Unit:	1848	hrs

Emission Data Summary		CEM Performance Summary					
1. Duration of Excess Emissions		Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown	0.00	hrs	A. Monitor Malfunction	0.00	hrs		
B. Control Equipment	0.00	hrs	B. Non- Monitor Malfunction	0.00	hrs		
C. Process Problems	0.00	hrs	C. QA Calibration	0.00	hrs		
D. Other Known Causes	0.00	_hrs	D. Other Known Causes	4.00	hrs		
E. Unknown Causes	0.00	hrs	E. Unknown Causes	0.00	hrs		
2. Total Duration	0.00	_hrs	2. Total Duration	4.00	hrs		
3. Percent of Total Excess Emissions	0.00	_%	3. Percent of Total CEM Downtime	0.22	%		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	CO	CO2	(02	) TRS	H2S	HC1	Opacity	(Circle One	e)
Other:	N/A		moner-			<u>.</u>					
Reporting	Quarter:	Fourth	2012	•		Monite	or Model:	Magnos	106 (O2)		
	Facility:	Marathor	n Petroleum	Compan	y LP	Manu	ıfacturer:	ABB			
		1300 Sou	uth Fort Stre	eet							
		Detroit, N	/II 48217			Emiss	on Limit:	none			
Emiss	ion Unit:	CCR Inte	rheater (02	2)		Avera	ge Time:	none			
						Total Opera	ting Hour	s of Emis	sion Unit:	1848	hrs

Emission Data Summary		CEM Performance Summary  1. Duration of CEM Downtime During Source Operation					
Duration of Excess Emissions							
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 h	nrs			
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 h	าrs			
C. Process Problems	0.00 hrs	C. QA Calibration	0.00 h	าrs			
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 h	าrs			
E. Unknown Causes	<u>0.00</u> hrs	E. Unknown Causes	0.00 h	nrs			
2. Total Duration	0.00hrs	2. Total Duration	h	nrs			
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.20 9	%			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant: NOx CO CO2 02 TRS HC1 H2S Opacity (Circle One) Other: N/A Reporting Quarter: Fourth 2012 Monitor Model: Limas 11 (NOx) Facility: Marathon Petroleum Company LP Manufacturer: ABB 1300 South Fort Street Detroit, MI 48217 Emission Limit: 0.05 lbs/MMBTU Emission Unit: Crude/Vacuum Charge Heater (NOx) Average Time: annual rolling average

Total Operating Hours of Emission Unit: \_\_\_\_1529 \_\_\_ hrs

Emission Data Summary		1. Duration of CEM Downtime During Source Operation				
Duration of Excess Emissions						
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs		
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs		
C. Process Problems	<u>0.00</u> hrs	C. QA Calibration	3.00	hrs		
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs		
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	hrs		
2. Total Duration	0.00 hrs	2. Total Duration	7.00	hrs		
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.46	%		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	02	TRS	H2S	HC1	Opacity	(Circle One)	)
Other: 1	V/A	***************************************									
Reporting (	Quarter:	Fourth	2012			Monito	r Model:	Uras 26 (	CO)		
	Facility:		Petroleum ( uth Fort Stree		.Р	Manu	facturer:	ABB			
		Detroit, N	The same of the sa			Emissio	on Limit:	0.01 lbs/N	MBTU		
Emissi	on Unit:	Crude/Va	cuum Charg	e Heater (	<u>CO)</u>	Averag	ge Time: _	annual rol	ling averaç	је	
					То	tal Operati	na Hours	of Emiss	sion Unit:	1520	hro

Emission Data Summar		CEM Performance Summary				
1. Duration of Excess Emissions		Duration of CEM Downtime During Source Operation				
<ul><li>A. Startup/Shutdown</li><li>B. Control Equipment</li><li>C. Process Problems</li><li>D. Other Known Causes</li><li>E. Unknown Causes</li></ul>	0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs	A. Monitor Malfunction     B. Non- Monitor Malfunction     C. QA Calibration     D. Other Known Causes     E. Unknown Causes	0.00 hrs 0.00 hrs 3.00 hrs 4.00 hrs 0.00 hrs			
2. Total Duration	0.00 hrs	2. Total Duration	7.00 hrs			
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.46 %			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	S02	NOx	co	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One	e)
Other: I	N/A	The state of the s	more,								
Reporting	Quarter:	Fourth	2012			Monite	or Model:	Magnos :	106 (O2)		
			Petroleum		yLP	Manu	ıfacturer:	ABB			
	-		th Fort Stre	et	www.						
	બુ≇	Detroit, N	11 48217			Emissi	on Limit: _	none		***************************************	
Emissi	on Unit:	Crude/Va	cuum Char	ge Heate	r (O2)	Avera	ge Time:	none			
					Tota	al Operat	ing Hours	of Emis	sion Unit:	1529	hrs

Emission Data Summary		CEM Performance Summary  1. Duration of CEM Downtime During Source Operation			
1. Duration of Excess Emissions					
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs		
B. Control Equipment	0.00hrs	B. Non- Monitor Malfunction	0.00 hrs		
C. Process Problems	0.00 hrs	C. QA Calibration	3.00 hrs		
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs		
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00 hrs		
2. Total Duration	hrs	2. Total Duration	hrs		
3. Percent of Total Excess Emissions	0.00%	3. Percent of Total CEM Downtime	0.46 %		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant: **SO2** NOx CO CO2 02 **TRS** H2S HC1 Opacity (Circle One) Other: N/A Reporting Quarter: Fourth 2012 Monitor Model: Limas 11 (NOx) Facility: Marathon Petroleum Company LP Manufacturer: ABB 1300 South Fort Street

Emission Unit: DHT Heater (NOx) Average Time: annual rolling average

Total Operating Hours of Emission Unit: 1848 hrs

Emission Limit: 0.05 lbs/MMBTU

Emission Data Summary		CEM Performance Summary  1. Duration of CEM Downtime During Source Operation				
1. Duration of Excess Emissions						
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs			
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 hrs			
C. Process Problems	0.00 hrs	C. QA Calibration	3.00 hrs			
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs			
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00 hrs			
2. Total Duration	hrs	2. Total Duration	7.00 hrs			
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.38 %			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

Detroit, MI 48217

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	02	TRS	H2S	HC1	Opacity	(Circle One)	
Other: 1	V/A										
Reporting	Quarter:	Fourth	2012			Monito	or Model:	Uras 26 (	CO)	ментен же женеттен теререререререре	
			Petroleum		LP	Manu	facturer:	ABB	and the second s		· · · · · · · · · · · · · · · · · · ·
	*	Detroit, N	11 48217			Emissi	on Limit:	0.02 lbs/N	MBTU		
Emissi	on Unit:	DHT Hea	ter (CO)			Avera	ge Time:	annual ro	lling avera	ge	
					То	tal Operat	ing Hours	of Emis	sion Unit:	1848 hrs	<b>i</b> ii

Emission Data Summary		CEM Performance Summary  1. Duration of CEM Downtime During Source Operation			
1. Duration of Excess Emissions					
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	nrs	
B. Control Equipment	<u>0.00</u> hrs	B. Non- Monitor Malfunction	0.00 H	nrs	
C. Process Problems	0.00hrs	C. QA Calibration	3.00 H	าrs	
D. Other Known Causes	0.00hrs	D. Other Known Causes	4.00 h	าเร	
E. Unknown Causes	0.00 hrs	E. Unknown Causes	**************************************	nrs	
2. Total Duration	0.00hrs	2. Total Duration	7.00 h	nrs	
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.38 9	<b>%</b>	

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	CO	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)	
Other: I	N/A	<del> </del>								(and the	
Reporting	Quarter:	Fourth	2012			Monito	or Model:	Magnos 1	106 (O2)		
	Facility:	Marathon I			y LP	Manu	facturer:	ABB			*****
		Detroit, MI	THE RESERVE THE PERSON NAMED IN COLUMN TWO	· · · · · · · · · · · · · · · · · · ·		Emissi	on Limit:	none			
Emissi	on Unit:	DHT Heate	er (O2)		The State of the S	Avera	ge Time:	none			
					To	tal Operat	ing Hours	of Emis	sion Unit:	1848 hrs	

Emission Data Summary	1	CEM Performance Summary				
1. Duration of Excess Emissions		Duration of CEM Downtime During Source Operation				
<ul><li>A. Startup/Shutdown</li><li>B. Control Equipment</li><li>C. Process Problems</li><li>D. Other Known Causes</li><li>E. Unknown Causes</li></ul>		A. Monitor Malfunction B. Non- Monitor Malfunction C. QA Calibration D. Other Known Causes E. Unknown Causes	0.00 hrs 0.00 hrs 3.00 hrs 4.00 hrs 0.00 hrs			
Total Duration     Percent of Total Excess Emissions	0.00 hrs	Total Duration     Percent of Total CEM Downtime				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant: SO2 NOx CO CO2 02 **TRS** HC1 Opacity (Circle One) Other: N/A Reporting Quarter: Fourth 2012 Monitor Model: PGC2000 Facility: Marathon Petroleum Company LP Manufacturer: ABB 1300 South Fort Street Detroit, MI 48217 Emission Limit: 160 ppm Emission Unit: East Plant Fuel Gas NSPS Heaters Average Time: 3 hour average

Total Operating Hours of Emission Unit: 1848 hrs

Emission Data Summary		1. Duration of CEM Downtime During Source Operation				
Duration of Excess Emissions						
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	15.00 hrs			
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 hrs			
C. Process Problems	12.00 hrs	C. QA Calibration	0.00 hrs			
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs			
E. Unknown Causes	0.00hrs	E. Unknown Causes	0.00 hrs			
2. Total Duration	12.00hrs	2. Total Duration	19.00 hrs			
3. Percent of Total Excess Emissions	0.65%	3. Percent of Total CEM Downtime	1.03 %			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant: SO2 NOx CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: N/A

Reporting Quarter: Fourth 2012 Monitor Model: LIMAS-11-UV

Emission Unit: East Plant SRU Thermal Oxidizer (SO2)

Facility: Marathon Petroleum Company LP Manufacturer: ABB Advance Optima

 1300 South Fort Street
 Emission Limit: 250 ppm & 175 ppm\*

Total Operating Hours of Emission Unit: 1789 hrs

Average Time: 12 hr ave & \*12 month rolling ave

Emission Data Summary	and the state of t	CEM Performance Summary				
1. Duration of Excess Emissions		Duration of CEM Downtime During Source Operation				
A. Startup/Shutdown	0.00hrs	A. Monitor Malfunction	0.00	hrs		
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs		
C. Process Problems	53.00 hrs	C. QA Calibration	19.00	hrs		
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs		
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	_ _hrs		
2. Total Duration	53.00 hrs	2. Total Duration	23.00	_hrs		
3. Percent of Total Excess Emissions	2.96 %	3. Percent of Total CEM Downtime	1.29	%		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	co	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)	
Other: I	V/A	antonio de la constanta de la c								,	
Reporting	Quarter:	Fourth	2012			Monito	or Model:	MAGNOS	3 106/206		· ·
	Facility:	Marathon			y LP	Manu	facturer:	ABB Adva	ance Optim	a ·	
		1300 Sout Detroit, MI		et		Emissi	on Limit:	none			Pro-
Emissi	on Unit:	East Plant	SRU Ther	mal Oxio	lizer (O2)	Avera	ge Time: ַ	none			Market Company
					Tota	al Operat	ing Hours	of Emiss	sion Unit:	1789 hrs	

Emission Data Summary	1:	1. Duration of CEM Downtime During Source Operation				
1. Duration of Excess Emissions						
<ul><li>A. Startup/Shutdown</li><li>B. Control Equipment</li><li>C. Process Problems</li><li>D. Other Known Causes</li><li>E. Unknown Causes</li></ul>	0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs	A. Monitor Malfunction B. Non- Monitor Malfunction C. QA Calibration D. Other Known Causes E. Unknown Causes	0.00 hrs 0.00 hrs 19.00 hrs 4.00 hrs 0.00 hrs			
Total Duration     Percent of Total Excess Emissions	0.00 hrs	Total Duration     Percent of Total CEM Downtime	23.00 hrs			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	O2	TRS	H2S	HC1	Opacity	(Circle One)	ļ.
Other: <u>I</u>	N/A	ar en minimo per un	and the second s								
Reporting	Quarter:	Fourth	2012			Monite	or Model:	URAS 14	(CO)		
	Facility:	Marathor	n Petroleum	Company	/LP	Manu	ıfacturer:	ABB			
		1300 Soi	uth Fort Stre	et			,				
		Detroit, N	AI 48217			Emissi	on Limit:	0.02 lbs/l	имвти	, , , , , , , , , , , , , , , , , , ,	
Emissi	ion Unit:	FCCU C	harge Heate	r (CO)		Avera	ige Time:	annual ro	lling averaç	je	· ····································
					T	otal Onera	tina Hour	s of Emis	eion Unit:	1848	hre

Emission Data Summary		1. Duration of CEM Downtime During Source Operation					
1. Duration of Excess Emissions							
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs				
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	4.00 hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs				
E. Unknown Causes	<u>0.00</u> hrs	E. Unknown Causes	0.00 hrs				
2. Total Duration	0.00 hrs	2. Total Duration	8.00 hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.43 %				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant:	SO2	NOx	co	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)
Other: I	N/A		M.							,
Reporting	Quarter:	Fourth	2012			Monito	or Model:	Magnos 1	106 (O2)	
	Facility:		Petroleum		y LP	Manu	ıfacturer:	ABB		
		1300 Sou	th Fort Stre	et						
		Detroit, M	I 48217			Emissi	on Limit:	none		
Emissi	ion Unit:	FCCU Ch	arge Heate	r (O2)		Avera	ge Time:	none	·	
					Tot	al Operat	ing Hours	of Emis	sion Unit:	1848 hrs

Emission Data Summary		CEM Performance Summary  1. Duration of CEM Downtime During Source Operation					
1. Duration of Excess Emissions							
A. Startup/Shutdown     B. Control Equipment	0.00 hrs	A. Monitor Malfunction     B. Non- Monitor Malfunction	0.00	_hrs			
C. Process Problems D. Other Known Causes	0.00 hrs 0.00 hrs	C. QA Calibration D. Other Known Causes	1.00	hrs hrs _hrs			
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	hrs			
2. Total Duration	<u>0.00</u> hrs	2. Total Duration	5.00	_hrs			
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.27	_%			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time)  $\times$  100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant:

SO2

CO CO2 02

TRS H2S HC1

Opacity (Circle One)

Other: N/A

Reporting Quarter: Fourth 2012

Monitor Model: Limas 11 (NOx)

Facility: Marathon Petroleum Company LP

Manufacturer: ABB

1300 South Fort Street

Detroit, MI 48217

Emission Limit: 80 ppm

Average Time: 7 day average

Emission Unit: FCCU Regenerator (NOx)

Emission Limit: 70 ppm

Average Time: 365 day average

Total Operating Hours of Emission Unit: 1566.5 hrs

Emission Data Summan	/	CEM Performance Summary						
1. Duration of Excess Emissions		Duration of CEM Downtime During Source Operation						
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs				
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	19.00	hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs				
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	hrs				
2. Total Duration	hrs	2. Total Duration	23.00	_hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	1.47	_%				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	02	TRS	H2S	HC1	Opacity	(Circle One)
Other:	N/A								•	
Reporting	Quarter:	Fourth	2012			Monite	or Model:	URAS 14	(CO)	
	Facility:	Marathor	n Petroleum	Company	LP	Manu	ıfacturer:	ABB		
		1300 Soi	uth Fort Stre	et			,		***************************************	
		Detroit, N	M 48217			Emissi	on Limit:	500 ppm		
Emissi	ion Unit:	FCCU Re	egenerator (	CO)		Avera	ge Time:	one hour	average	and the state of t
					To	ital Onerai	ina Haur	of Emila	alan Hult.	1500 F

Emission Data Summar		1. Duration of CEM Downtime During Source Operation					
1. Duration of Excess Emissions							
<ul><li>A. Startup/Shutdown</li><li>B. Control Equipment</li><li>C. Process Problems</li><li>D. Other Known Causes</li><li>E. Unknown Causes</li></ul>	71.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs	A. Monitor Malfunction B. Non- Monitor Malfunction C. QA Calibration D. Other Known Causes E. Unknown Causes	0.00 hr 0.00 hr 19.00 hr 4.00 hr	s s			
Total Duration     Percent of Total Excess Emissions	71.00 hrs	Total Duration     Percent of Total CEM Downtime	23.00hr				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant: SO2 NOx CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: N/A

Reporting Quarter: Fourth 2012 Monitor Model: Limas 11 (SO2)

Facility: Marathon Petroleum Company LP Manufacturer: ABB

1300 South Fort Street

Detroit, MI 48217

Emission Limit: 50 ppm

Emission Unit: FCCU Regenerator (SO2)

Average Time: 7 day average

Emission Limit: 25 nom

Emission Unit: FCCU Regenerator (SO2) Emission Limit: 25 ppm

Average Time: 365 day average

Total Operating Hours of Emission Unit: \_\_\_1566.5 \_\_ hrs

Emission Data Summary		CEM Performance Summar	У					
1. Duration of Excess Emissions		Duration of CEM Downtime During St	Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown B. Control Equipment C. Process Problems D. Other Known Causes E. Unknown Causes	0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs	A. Monitor Malfunction B. Non- Monitor Malfunction C. QA Calibration D. Other Known Causes E. Unknown Causes	0.00 hrs 0.00 hrs 19.00 hrs 4.00 hrs 0.00 hrs					
Total Duration     Percent of Total Excess Emissions	hrs %	Total Duration     Percent of Total CEM Downtime	hrs 1.47 %					

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant:	SO2	NOx	co	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)
Other: <u>I</u>	V/A		41							
Reporting	Quarter:	Fourth	2012	2		Monit	or Model:	Magnos	16 (O2)	
	Facility:	Marathon	Petroleum	Compan	y LP	_ Manı	ufacturer:	ABB		
		1300 Sou	th Fort Stre	eet						
		Detroit, M	II 48217			Emiss	ion Limit:	none		de construcción de la construcción
Emissi	ion Unit:	FCCU Re	generator	(02)		_ Aver	age Time:	none		
					1	otal Opera	tina Hour	s of Emis	sion Unit:	1566.5 hrs

Emission Data Summary	·	CEM Performance Summa	1. Duration of CEM Downtime During Source Operation					
Duration of Excess Emissions		Duration of CEM Downtime During S						
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs				
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	19.00	hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs				
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	hrs				
2. Total Duration	0.00 hrs	2. Total Duration	23.00	_hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	1.47	_%				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant: SO2 NOx CO CO<sub>2</sub> 02 TRS H2S HC1 (Opacity) (Circle One) Other: N/A Reporting Quarter: Fourth Monitor Model: Lighthawk 560 Facility: Marathon Petroleum Company LP Manufacturer: Teledyne Monitor Labs 1300 South Fort Street Detroit, MI 48217 Emission Limit: 20% opacity Emission Unit: FCCU Regenerator Average Time: 6 minute average

Total Operating Hours of Emission Unit: 1566.5 hrs

0.00

7.00

0.45

hrs

hrs

E. Unknown Causes

3. Percent of Total CEM Downtime

2. Total Duration

**Emission Data Summary CEM Performance Summary** 1. Duration of Excess Emissions Duration of CEM Downtime During Source Operation A. Startup/Shutdown 1.30 hrs A. Monitor Malfunction 0.00 hrs B. Control Equipment 0.00 hrs B. Non- Monitor Malfunction 0.00 hrs C. Process Problems 0.00 hrs C. QA Calibration 3.00 hrs D. Other Known Causes D. Other Known Causes 0.00 hrs 4.00 hrs E. Unknown Causes 0.00

hrs

1.30 hrs

0.08 %

2. Total Duration

3. Percent of Total Excess Emissions

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant: SO<sub>2</sub> NOx) CO CO2 02 TRS H2S HC1 Opacity (Circle One) Other: N/A Reporting Quarter: Fourth 2012 Monitor Model: Limas 11 (NOx) Facility: Marathon Petroleum Company LP Manufacturer: ABB 1300 South Fort Street Detroit, MI 48217 Emission Limit: 0.05 lbs/MMBTU Emission Unit: GOHT Heater (NOx) Average Time: annual rolling average Total Operating Hours of Emission Unit: 1848 hrs

Emission Data Summary		CEM Performance Summary					
1. Duration of Excess Emissions		Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown B. Control Equipment C. Process Problems D. Other Known Causes E. Unknown Causes	0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs 0.00 hrs	A. Monitor Malfunction B. Non- Monitor Malfunction C. QA Calibration D. Other Known Causes E. Unknown Causes	0.00 hrs 0.00 hrs 3.00 hrs 4.00 hrs 0.00 hrs				
2. Total Duration 3. Percent of Total Excess Emissions		Total Duration     Percent of Total CEM Downtime	7.00 hrs				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant:	SO2	NOx	(co)	CO2	02	TRS	H2S	HC1	Opacity	(Circle One)	
Other: I	N/A		in the second								
Reporting	Quarter:	Fourth	2012			Monito	or Model:	Uras 26 (	CO)		
	Facility:		Petroleum uth Fort Stre		LP	Manu	facturer:	ABB			-
		Detroit, N	The second secon			Emissi	on Limit:	0.02 lbs/N	MBTU		
Emissi	ion Unit:	GOHT H	eater (CO)			Avera	ge Time:	annual ro	lling averag	je	arain.
					To	tal Operat	ing Hours	of Emis	sion Unit:	1848 hrs	

Emission Data Summar		1. Duration of CEM Downtime During Source Operation					
1. Duration of Excess Emissions							
A. Startup/Shutdown	0.00hrs	A. Monitor Malfunction	0.00	hrs			
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs			
C. Process Problems	0.00 hrs	C. QA Calibration	3.00	hrs			
D. Other Known Causes	0.00hrs	D. Other Known Causes	4.00	hrs			
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	_ _hrs			
2. Total Duration	0.00 hrs	2. Total Duration	7.00	_hrs			
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.38	_%			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time)  $\times$  100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant:	SO2	NOx	CO	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)	Ė
Other:	N/A		ė-								
Reporting	Quarter:	Fourth	2012			Monit	or Model:	Magnos	106 (O2)	Minorphonoscoccoccoccoccoccoccoccoccoccoccoccocco	
	Facility:	Marathon	Petroleum		y LP	Manu	ufacturer:	ABB	·	The second of th	
		Detroit, M	Activities of the last of the			_ _ Emissi	ion Limit:	none			·
Emiss	ion Unit:	GOHT He	ater (O2)			Avera	ge Time:	none	- Salasia Liverce		·
					T	otal Opera	ting Hours	s of Emis	sion Unit:	1848	hrs

Emission Data Summary		1. Duration of CEM Downtime During Source Operation					
1. Duration of Excess Emissions							
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs			
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	- hrs			
C. Process Problems	0.00 hrs	C. QA Calibration	3.00	hrs			
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs			
E. Unknown Causes	<u>0.00</u> hrs	E. Unknown Causes	0.00	hrs			
2. Total Duration	0.00hrs	2. Total Duration	7.00	_hrs			
3. Percent of Total Excess Emissions	0.00%	3. Percent of Total CEM Downtime	0.38	_%			

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant: SO2 NOx CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: N/A

Reporting Quarter: Fourth 2012 Monitor Model: LIMAS-11-UV

Facility: Marathon Petroleum Company LP Manufacturer: ABB Advance Optima

1300 South Fort Street

Detroit, MI 48217

Emission Limit: 250 ppm\* 100 ppm\*\*

Emission Unit: North Plant SRU Thermal Oxidizer (SO2)

Average Time: \*12 hr ave \*\*12 month rolling ave

Total Operating Hours of Emission Unit: 1776.5 hrs

Emission Data Summan		CEM Performance Summary			
Duration of Excess Emissions		Duration of CEM Downtime During Science	ource Operation		
A. Startup/Shutdown     B. Control Equipment     C. Process Problems     D. Other Known Causes     E. Unknown Causes	0.00 hrs 0.00 hrs 5.00 hrs 0.00 hrs 0.00 hrs	A. Monitor Malfunction B. Non- Monitor Malfunction C. QA Calibration D. Other Known Causes E. Unknown Causes	0.00 hrs 0.00 hrs 4.00 hrs 4.00 hrs 0.00 hrs		
Total Duration     Percent of Total Excess Emissions	5.00 hrs	Total Duration     Percent of Total CEM Downtime	8.00 hrs		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	CO	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)
Other:	N/A									,
Reporting	Quarter:	Fourth	2012			Monito	or Model:	MAGNOS	3 106/206	
	Facility:	Marathon 1300 Sout			y LP	Manu	ıfacturer:	ABB Adv	ance Optim	a
		Detroit, MI	The second secon			Emissi	on Limit:	none		
Emiss	ion Unit:	North Plan	t SRU The	ermal Oxid	dizer (O2)	Avera	ge Time:	none		
					Tot	al Operat	ing Hours	of Emis	sion Unit:	1776.5 hrs

Emission Data Summary		CEM Performance Summary			
1. Duration of Excess Emissions		Duration of CEM Downtime During Science	ource Opera	tion	
A. Startup/Shutdown     B. Control Equipment     C. Process Problems     D. Other Known Causes		A. Monitor Malfunction     B. Non- Monitor Malfunction     C. QA Calibration     D. Other Known Causes	0.00 0.00 4.00 4.00	hrs hrs hrs _hrs	
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00	hrs	
2. Total Duration	<u>0.00</u> hrs	2. Total Duration	8.00	hrs	
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.41	_%	

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time)  $\times$  100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant: SO2 (NOx) CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: N/A

Reporting Quarter: Fourth 2012 Monitor Model: Limas 11 (NOx)

Facility: Marathon Petroleum Company LP Manufacturer: ABB

1300 South Fort Street

Detroit, MI 48217

Emission Limit: 0.05 lbs/MMBTU

Emission Unit: Vaccuum Heater (NOx)

Average Time: annual rolling average

Total Operating Hours of Emission Unit: 1519.5 hrs

Emission Data Summary		CEM Performance Summar	у	
Duration of Excess Emissions		Duration of CEM Downtime During Science	ource Operat	ion
A. Startup/Shutdown	0.00hrs	A. Monitor Malfunction	0.00	hrs
B. Control Equipment	0.00hrs	B. Non- Monitor Malfunction	11.00	hrs
C. Process Problems	<u>0.00</u> hrs	C. QA Calibration	0.00	hrs
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00	hrs
E. Unknown Causes	<u>0.00</u> hrs	E. Unknown Causes	0.00	_ _hrs
2. Total Duration	0.00 hrs	2. Total Duration	15.00	_hrs
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.99	_%

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	(co)	CO2	02	TRS	H2S	HC1	Opacity (	(Circle One)	
Other:	N/A	<del></del>									
Reporting	Quarter	<u>Fourth</u>	2012			Monito	or Model:	Uras 26 (	CO)		Mindra coroner was energia a sa
	Facility		Petroleum uth Fort Stre		LP	Manu	ıfacturer:	ABB			War oyacanan
		Detroit, M	The second secon			Emissi	on Limit:	0.01 lbs/l	имвти		
Emissi	lon Unit:	Vaccuum	Heater (CC	))		Avera	ge Time:	annual ro	lling average	) ·	
					То	otal Operat	ing Hours	of Emis	sion Unit: _	1519.5 hrs	S

Emission Data Summary		CEM Performance Summary			
1. Duration of Excess Emissions		Duration of CEM Downtime During Science	ource Opera	tion	
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00	hrs	
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs	
C. Process Problems	0.00 hrs	C. QA Calibration	0.00	hrs	
D. Other Known Causes	0.00hrs	D. Other Known Causes	4.00	hrs	
E. Unknown Causes	<u>0.00</u> hrs	E. Unknown Causes	0.00	 hrs	
2. Total Duration	0.00 hrs	2. Total Duration	4.00	_hrs	
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.26	_%	

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time)  $\times$  100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	co	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)
Other: 1	N/A		1009V · .							
Reporting	Quarter:	Fourth	2012			Monit	or Model:	Magnos	106 (O2)	ellanannoalan oo
	Facility:		Petroleum		y LP	_ Manu	ufacturer:	ABB		
		1300 Sou	uth Fort Stre	eet						
		Detroit, N	11 48217			Emissi	ion Limit:	none	×	
Emissi	ion Unit:	Vaccuum	Heater (O	2)		Avera	ige Time:	none		The second secon
					T	otal Opera	ting Hour	s of Emis	sion Unit:	1519.5 hrs

Emission Data Summary		CEM Performance Summary				
1. Duration of Excess Emissions		Duration of CEM Downtime During Science	ource Opera	tion		
A. Startup/Shutdown	0.00hrs	A. Monitor Malfunction	0.00	hrs		
B. Control Equipment	0.00hrs	B. Non- Monitor Malfunction	0.00	hrs		
C. Process Problems	0.00 hrs	C. QA Calibration	0.00	hrs		
D. Other Known Causes	<u>0.00</u> hrs	D. Other Known Causes	4.00	hrs		
E. Unknown Causes	<u>0.00</u> hrs	E. Unknown Causes	0.00	hrs		
2. Total Duration	0.00 hrs	2. Total Duration	4.00	hrs		
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.26	%		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant: SO2 NOx CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: Flare Pilot

Reporting Quarter: Fourth 2012 Monitor Model: SLX-202

Facility: Marathon Petroleum Company LP Manufacturer: Powertrol

1300 South Fort Street

Detroit, MI 48217

Emission Limit: Pilot Light Present

Emission Unit: Vents to Alkylation Unit Flare Average Time: continuously

Total Operating Hours of Emission Unit: 1638 hrs

Emission Data Summary	·	CEM Performance Summary				
1. Duration of Excess Emissions		Duration of CEM Downtime During Science	ource Operat	ion		
A. Startup/Shutdown	hrs	A. Monitor Malfunction	3.00	_hrs		
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00	hrs		
C. Process Problems	0.00hrs	C. QA Calibration	0.00	hrs		
D. Other Known Causes	0.00hrs	D. Other Known Causes*	4.00	hrs		
E. Unknown Causes	0.00hrs	E. Unknown Causes	0.00	hrs		
2. Total Duration	0.00 hrs	2. Total Duration	7.00	_hrs		
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.43	_%		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

<sup>\*</sup>Other Known Causes: Hours in this category are attributed to weather, including rain and snow, as well as fog from cooling tower operation interfering with the sight of the analyzer. Visual checks verified a pilot was present.

Pollutant: SO2 NOx CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: Flare Pilot

Reporting Quarter: Fourth 2012 Monitor Model: 2KU-531-0076-CNN-02-NNN

Facility: Marathon Petroleum Company LP Manufacturer: THERMO SENSORS

1300 South Fort Street

Detroit, MI 48217 Emission Limit: Pilot Light Present

Emission Unit: Vents to Coker Flare Average Time: continuously

Total Operating Hours of Emission Unit: 2143.5 hrs

Emission Data Summary		CEM Performance Summar	У	
1. Duration of Excess Emissions		Duration of CEM Downtime During Section 1. Duration 1. Duration of CEM Downtime During Section 1. Duration 1	ource Opera	tion
A. Startup/Shutdown     B. Control Equipment     C. Process Problems	0.00 hrs 0.00 hrs	A. Monitor Malfunction B. Non- Monitor Malfunction	0.00	hrs hrs
D. Other Known Causes E. Unknown Causes	0.00 hrs 0.00 hrs 0.00 hrs	C. QA Calibration D. Other Known Causes* E. Unknown Causes	0.00 4.00 0.00	hrs hrs hrs
2. Total Duration	hrs	2. Total Duration	4.00	hrs
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.19	_%

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

<sup>\*</sup>Other Known Causes: Hours in this category are attributed to weather, including rain and snow, as well as fog from cooling tower operation interfering with the sight of the analyzer. Visual checks verified a pilot was present.

Pollutant: SO2 NOx CO CO2 02 TRS H<sub>2</sub>S HC1 Opacity (Circle One) Other: Flare Pilot Reporting Quarter: Fourth 2012 Monitor Model: SLX-202 Facility: Marathon Petroleum Company LP Manufacturer: Powertrol 1300 South Fort Street Detroit, MI 48217 Emission Limit: Pilot Light Present Emission Unit: Vents to CP Flare Average Time: continuously

Total Operating Hours of Emission Unit: 2120 hrs

Emission Data Summan		CEM Performance Summary					
1. Duration of Excess Emissions		Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown     B. Control Equipment	0.00 hrs	A. Monitor Malfunction B. Non- Monitor Malfunction	0.00 hrs				
C. Process Problems D. Other Known Causes	0.00 hrs 0.00 hrs	C. QA Calibration D. Other Known Causes*	0.00 hrs 0.00 hrs 8.00 hrs				
E. Unknown Causes	0.00hrs	E. Unknown Causes	0.00 hrs				
2. Total Duration	hrs	2. Total Duration	8.00hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.38 %				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

<sup>\*</sup>Other Known Causes: Hours in this category are attributed to weather, including rain and snow, as well as fog from cooling tower operation interfering with the sight of the analyzer. Visual checks verified a pilot was present.

Pollutant: SO2 NOx CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: Flare Pilot

Reporting Quarter: Fourth 2012 Monitor Model: SLX-202

Facility: Marathon Petroleum Company LP Manufacturer: Powertrol

1300 South Fort Street

Detroit, MI 48217

Emission Limit: Pilot Light Present

Emission Unit: Vents to Crude Flare Average Time: continuously

Total Operating Hours of Emission Unit: 1556 hrs

Emission Data Summary		CEM Performance Summary			
1. Duration of Excess Emissions		Duration of CEM Downtime During Science	ource Operation		
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs		
B. Control Equipment	0.00hrs	B. Non- Monitor Malfunction	0.00 hrs		
C. Process Problems	0.00hrs	C. QA Calibration	0.00 hrs		
D. Other Known Causes	0.00 hrs	D. Other Known Causes*	18.00 hrs		
E. Unknown Causes	0.00 hrs	E. Unknown Causes	2.00 hrs		
2. Total Duration	0.00hrs	2. Total Duration	hrs		
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	1.29 %		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

<sup>\*</sup>Other Known Causes: Hours in this category are attributed to weather, including rain and snow, as well as fog from cooling tower operation interfering with the sight of the analyzer. Visual checks verified a pilot was present.

Pollutant: SO2 NOx CO CO2 O2 TRS H2S HC1 Opacity (Circle One)

Other: Flare Pilot

Reporting Quarter: Fourth 2012 Monitor Model: SLX-202

Facility: Marathon Petroleum Company LP Manufacturer: Powertrol

1300 South Fort Street

Detroit, MI 48217 Emission Limit: Pilot Light Present

Emission Unit: Vents to Unifiner Flare Average Time: continuously

Total Operating Hours of Emission Unit: 2113 hrs

Emission Data Summary		CEM Performance Summary					
1. Duration of Excess Emissions			Duration of CEM Downtime During Source Operation				
A. Startup/Shutdown	0.00h	ırs	A. Monitor Malfunction	0.00	hrs		
B. Control Equipment	<u>0.00</u> h	ırs	B. Non- Monitor Malfunction	0.00	hrs		
C. Process Problems	<u>0.00</u> h	ırs	C. QA Calibration	0.00	hrs		
D. Other Known Causes	<u>0.00</u> h	ιrs	D. Other Known Causes*	53.00	hrs		
E. Unknown Causes	<u>0.00</u> h	rs	E. Unknown Causes	0.00	_ _hrs		
2. Total Duration	<u>0.00</u> h	rs	2. Total Duration	53.00	_hrs		
3. Percent of Total Excess Emissions	0.00 %	6	3. Percent of Total CEM Downtime	2.51	%		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

<sup>\*</sup>Other Known Causes: Hours in this category are attributed to weather, including rain and snow, as well as fog from cooling tower operation interfering with the sight of the analyzer. Visual checks verified a pilot was present.

Pollutant:	S02	NOx	СО	CO2	O2	TRS H2S HC1 Opacity (Circle One)
Other: I	V/A		noti			
Reporting	Quarter:	Fourth	2012	<b>*</b>		Monitor Model: PGC2000
	Facility:			n Company I	_P	Manufacturer: ABB
		1300 Sou Detroit, M	uth Fort Str 11 48217	eet		Emission Limit: 160 ppm
Emiss	ion Unit:	West Pla	nt Fuel Ga	s NSPS Hea	aters	Average Time: 3 hour average
					Т	otal Operating Hours of Emission Unit: 1952 hrs

Emission Data Summary			1. Duration of CEM Downtime During Source Operation				
1. Duration of Excess Emissions							
A. Startup/Shutdown	3.00	hrs	A. Monitor Malfunction	0.00	hrs		
B. Control Equipment	0.00	hrs	B. Non- Monitor Malfunction	0.00	hrs		
C. Process Problems	4.00	hrs	C. QA Calibration	3.00	hrs		
D. Other Known Causes	0.00	hrs	D. Other Known Causes	4.00	hrs		
E. Unknown Causes	0.00	hrs	E. Unknown Causes	0.00	hrs		
2. Total Duration	7.00	_hrs	2. Total Duration	7.00	hrs		
3. Percent of Total Excess Emissions	0.36	_%	3. Percent of Total CEM Downtime	0.36	%		

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	(NOx)	) co	CO2	02	TRS	H2S	HC1	Opacity	(Circle One)	ì
Other: <u>N</u>	V/A		ùi:								,
Reporting (	Quarter:	_ Fourth_	2012			Monito	or Model:	Limas 11	(NOx)		
ı	Facility:		Petroleum		LP	Manu	facturer:	ABB			
		Detroit, M	CONTRACTOR OF THE PARTY OF THE	et		Emissio	on Limit:	0.2 lbs/MI	мвти		
Emissio	on Unit:	Zurn Boile	er (NOx)	etrockerson valencial kinkelikoko erekuru errokkonia		Avera	ge Time: ַ	annual ro	ling averag	je .	
					То	tal Operati	ina Hours	of Emis	sion   Init-	17/18	hro

uration of CEM Downtime During S  A. Monitor Malfunction	tal state
A. Monitor Malfunction	A 24
B. Non- Monitor Malfunction     C. QA Calibration     D. Other Known Causes     E. Unknown Causes	0.00 hrs 0.00 hrs 1.00 hrs 6.00 hrs 0.00 hrs
eg vegette e never version <del>en menorio sign</del> ise, <del>e</del> e	7.00 hrs
	E. Unknown Causes  otal Duration  ercent of Total CEM Downtime

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

Pollutant:	SO2	NOx	(co)	CO2	02	TRS	H2S	HC1	Opacity	(Circle One	∍)
Other: N	ľA .										
Reporting 0	Quarter:	Fourth	2012			Monit	or Model:	URAS 26	(CO)		
ı	Facility:	Maratho	n Petroleum	Company	/LP	Manı	ıfacturer:	ABB			
		1300 So	uth Fort Stre	et							
		Detroit, N	M 48217	***************************************		Emissi	ion Limit:	0.1 lbs/M	MBTU	mmm <del>milatoris</del> tyres recenses assess	
Emissio	on Unit:	Zurn Boi	ler (CO)			Avera	ıge Time:	annual ro	lling averaç	ge	
					To	ital Opera	ting Hour	s of Emis	sion Unit:	1748	hrs

Emission Data Summary		CEM Performance Summary					
Duration of Excess Emissions		Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs				
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	0.00 hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs				
E. Unknown Causes	<u>0.00</u> hrs	E. Unknown Causes	0.00 hrs				
2. Total Duration	0.00 hrs	2. Total Duration	4.00 hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.23 %				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time) x 100%

Pollutant:	SO2	NOx	СО	CO2	(02)	TRS	H2S	HC1	Opacity	(Circle One)
Other: l	N/A	ennen engenoussia de mante propriété des comments	Sew							
Reporting	Quarter:	Fourth	2012	<b>*</b> -		Monit	or Model:	Magnos 2	2 (O2)	inenia.
	Facility:	Marathor	Petroleum	Compar	ıy LP	Mani	ufacturer:	ABB		
		1300 Sot	uth Fort Stre	eet			•			
		Detroit, N	11 48217			Emiss	ion Limit:	none		
Emiss	ion Unit:	Zurn Boil	er (O2)			Avera	age Time:	none		
					Tot	al Opera	tina Hours	of Emis	eion   Init:	1748 hre

Emission Data Summary		CEM Performance Summary					
Duration of Excess Emissions		Duration of CEM Downtime During Source Operation					
A. Startup/Shutdown	0.00 hrs	A. Monitor Malfunction	0.00 hrs				
B. Control Equipment	0.00 hrs	B. Non- Monitor Malfunction	0.00 hrs				
C. Process Problems	0.00 hrs	C. QA Calibration	0.00 hrs				
D. Other Known Causes	0.00 hrs	D. Other Known Causes	4.00 hrs				
E. Unknown Causes	0.00 hrs	E. Unknown Causes	0.00 hrs				
2. Total Duration	0.00 hrs	2. Total Duration	4.00hrs				
3. Percent of Total Excess Emissions	0.00 %	3. Percent of Total CEM Downtime	0.23 %				
	-		***************************************				

<sup>(%</sup> Total excess emissions) = (Total duration of excess emissions) / (Total operating time) x 100%

<sup>(%</sup> CEM downtime) = (Total duration of CEM downtime) / (Total operating time)  $\times$  100%

# Appendix B

New Source Performance Standards (NSPS) Subpart J Alternate Monitoring Plan (AMP) Data

Most Recent Sample Dates 7/4/2012 11/7/2012	Complex 3 (RADAR) - B  FCCU Disulfide off-gas H3S ppm 2 x year 0 4	Most Recent Sample Dates 7/4/2012 11/4/2012	Complex 3 (RADAR) - C CP Spent Caustic Drum Vent H2S ppm 2 x year 0 0	Most Recent Sample Dates 9/5/2012 12/27/2012	Complex 4 (AMP Sheet) - D  SR Aromatics Sump Vent H2S ppm 2 x year 0 0	Most Recent Sample Dates 9/5/2012 12/26/2012	Complex 4 (AMP Sheet) - E CCR Chlorsorb Vent S02 ppm 2 x year 0 0
	Complex 2 (AMP Sheet) - A Alky Spent Caustic H2S		Complex 4 (Leb Oata) CCR/SR Recycle H2	T. (************************************	Complex 2 (Lab Data)		
	Dpm When flaring		H2S ppm		DHT/Unifiner Recycle H2 H2S ppm		
Date			2 x year 14RHH2S LDd		5 x week 07RHH2S LD		
10/1/2012 10/2/2012	Unit down Unit down		Unit down Unit down		Unit down		
10 3 2012	Unit down Unit down		Unit down		Unit down Unit down		
10-5-2012	Unit down		Unit down Unit down		Unit down Unit down		
10 6 2012 10 7 2012	Unit down Unit down		Unit down Unit down		Unit down		
10.8:2012 10.9:2012	Unit down Unit down		Unit down		Unit down Unit down		
10 10 2012	Unit down		Unit down Unit down		Unit down Unit down		
10-11-2012	Unit down Unit down		Unit down		Unit down		
10/13/2012	Unit down		Unit down Unit down		Unit down Unit down		
10 14 2012 10 15 2012	Unit down Unit down		Unit down Unit down		Unit down Unit down		
10 16 2012 10 17 2012	Unit down Unit down		Unit down		Unit down		
10 18 2012	Unit down		Unit down Unit down		Unit down Unit down		
10/19/2012	Unit down Unit down		Unit down		Unit down		
10/21/2012 10/22/2012	Unit down		Unit down Unit down		Unit down Unit down		
10 23/2012	Unit down Unit down		Unit down Unit down		Unit down Unit down		
10/24/2012	Unit down Unit down		Unit down		Unit down		
10 26 2012	Unit down		Unit down		Unit down Unit down		
10 27/2012 10 28/2012	Unit down Unit down		Unit down Unit down		Unit down		
10/29/2012	Unit down		Unit down		Unit down Unit down		
10:30:2012 10:31:2012	Unit down Unit down		Unit down Unit down		Unit down Unit down		
11 1/2012 11/2/2012	Unit down Unit down		0		Unit down		
11/3/2012	Unit down		*1		Unit down Unit down		
11 4 2012 11 5 2012	Unit down 0		 <1		Unit down		
11 6 2012	0		0.		Unit down Unit down		
11.8/2012	ő		<1 <1		0		
11 9 2012 11 10 2012	0		<1 <1		N/A		
11 11 2012 11 12 2012	0.0		*i		10 0		
11/13/2012 11/14/2012	w.e.		<1		0		
11 15 2012			<1 <1		er en		
11/16/2012	0		<b>₹</b> 4		<1		
11 18 2012 11 19 2012	0 0		÷. ≪ <b>1</b>		<b>*1</b>		
11/20/2012	0		<1		<1 <1		
11 22 2012	0		<1		en.		
11/23/2012 11/24/2012	0		<1 <1		<1 <1		
11 25 2012 11 26 2012	0		<1 <1		ever, .		
11 27 2012 11 28 2012	0		<1		<1		
11/29/2012	0		«1		<1		
11 30 2012 12 1 2012	0		<1 <1		0		
12-2-2012 12-3-2012	0		<1		O .		
12 4 2012	7W.,'		0 <1		0 51		
12 5 2012 12 6 2012	0		<1 <1		0		
12/7/2012 12/8/2012	o o		<1		O.		
12 9 2012 12 10 2012	o o		<1 <1		0		
12 11 2012 12 12 2012	o		বা বা		O O		
12-13-2012	0		<1		0		
12 14 2012 12 15 2012	0		<1 <1		0		
12 16 2012 12 17 2012	0		<1		0. 0:		
12 18 2012 12 19 2012	0 0		<1 <1		0. 0:		
12/20/2012	ā		0		0		
12 21 2012 12 22 2012	0 0		0		0		
12 23 2012 12 24 2012	0		0		0 0		
12 25 2012	9.H		0		0		
12 26 2012 12 27 2012	0		0		0		
12:28:2012 12:29:2012	0 0		3655 ·		0		
12 30 2012 12 31 2012	Ö.		0.		0		
	<del>य</del> े		0		0		

# Appendix C Cylinder Gas Audit Information

Analyzer: B&W Boiler CEMS

Analyzer Manufacturer: ABB

Analyzer model #'s: Limas 11 (NOx), Magnos 106 (O2), Uras 14 (CO)

Constituents monitored (w/ranges): NOx (0-500), CO (0-500), O2 (0-10%)

Date CGA performed: 10/13/2012

Performed by: Glen Senczyszyn

Calibration gases used:

MAP stock #	Constituent	low- or mid-	Cylinder#	Exp date	Certified concentration	Units
76-188-232	NO	low	EB0025464	02/02/13	120	ppm
	CO	1000	ED0020404	02/02/13	125	ppm
76-188-219	O2	low	0208HL12	02/14/15	5.55	%
76-188-231	NO	mid	0915HD11	00/00/40	272	ppm
	CO	IIIIO	ווטחפופט	09/30/13	274	ppm
76-188-215	O2	mid	EB0023341	06/24/13	8.99	%

#### Low-level CGA:

Start time	End time	NO I	co	02	
15:18	15:29	116.6	125	5.55	
15:29	15:42	117.0	125	5.55	
15:42	15:54	117.0	125	5.55	
Ave	rage	116.9	125	5.55	
Cal gas		120.0	125	5.55	
CGA accuracy		2.6%	0.0%	0.0%	

High-level CGA:

Start time	End time	I NO I	co	02
15:54	16:07	268	273	8.99
16:07	16:19	268	273	8.99
16:19	16:34	268	273	8.99
Ave	rage	268.0	273	8.99
Cal ga		272.0	274	8.99
CGA a	ccuracy	1.5%	0.4%	0.0%

Analyzer: CCR Interheater

Analyzer Manufacturer: ABB

Analyzer model #'s: Limas11 (NOx), Uras 26 (CO), and Magnos 106 (O2)

Constituents monitored (w/ranges): NOx (0-100), CO low (0-50), CO high (0-500), and O2 (0-10%)

Date CGA performed: 12/18/2012

Performed by: Doug Pek and Dave Wright

Calibration gases used:

MAP stock #	Constituent	low- or mid-	Cylinder#	Exp date	Certified concentration	Units
76-000-074	NO	low	ED0040507		24.1	ppm
	CO low	low	EB0019527 06/2	06/27/14	12.9	ppm
76-000-069	CO high	low	00075004		122.0	ppm
	O2	low	CC275924	05/15/15	4.96	%
76-000-066	NO	mid	FRANCEAL		54.5	
	CO low	mid	EB0025654	06/29/14	27.6	ppm
76-188-165	CO high	mid			27.0	ppm
	O2	mid	EB0030987	06/27/15	9.03	ppm %

#### Low-level CGA:

Start time	End time	NOx	CO (low)	CO (high)	02
15:19	15:33	25.1	13.0	122.6	4.89
15:33	15:45	25.0	12.9	122.5	4.89
15:45	15:58	24.9	13.0	122.7	4.89
	rage	25.0	12.9	122.6	4.89
Cal gas		24.1	12.9	122.0	4.96
CGA ac	ccuracy	3.7%	0.3%	0.5%	1.4%

Start time	End time	NOx	CO (low)	CO (high)	O2
16:07	16:19	54.2	27.8	273.2	9.01
16:19	16:32	54.2	27.8	273.3	9.10
16:32	16:45	54.3	27.8	273.3	9.10
The second secon	age	54.2	27.8	273.3	9.07
Cal gas		54.5	27.6	277.0	9.03
CGA ac	curacy	0.5%	0.7%	1.3%	0.4%

Analyzer: CCR Charge Heater

Analyzer Manufacturer: ABB

Analyzer model #s: Limas11 (NOx), Uras 26 (CO), and Magnos 106 (O2)

Constituents monitored (w/ranges): NOx (0-100), CO high (0-500), and O2 (0-10%)

Date CGA performed:

12/18/2012

Performed by: Doug Pek and Dave Wright

Calibration gases used:

MAP stock # 76-000-074	Constituent NO	low- or mid-	Cylinder#	Exp date	Certified concentration	Units
		low	EB0019527	06/27/14	24.1	
76-000-069	CO	low	000		122.0	<u>ppm</u>
	O2	low	CC275924	05/15/15		ppm
76-000-066	NO	mid	EDOOGGE		4.96	%
76 400 405	CO	mid	EB0025654	06/29/14	54.5	ppm
76-188-165	02		EB0030987	06/27/15	277	ppm
	<u> </u>	mid		00/2//10	9.03	%

#### Low-level CGA:

Start time	End time	CO	NOx	
12:50	13:03			02
13:03	13:15	123	23.3	4.82
13:15		123	23.1	4.82
	13:27	123	22.9	4.81
	age	123	23.1	4.82
Cal gas	s value	122	24.1	The second secon
CGA ac	curacy	0.8%		4.96
		U.U.U	4.1%	2.9%

Start time	End time	CO	Nox	T ~~
13:32	13:44	273	53.0	02
13:44	13:57	273	The state of the s	8.84
13:57	14:09		53.1	8.83
Aver	The state of the s	273	53.0	8.83
Cal gas		273	53.0	8.83
OCA	value	277	54.5	9.03
CGA accuracy		1.4%	2.7%	2.2%

Analyzer: East Plant Fuel Gas

Analyzer Manufacturer: ABB

Analyzer model #'s: 2000GC

H2S (0-300)

Date CGA performed: 12/11/2012

Performed by: Glen Senczyszyn

Calibration gases used:

MAP stock #	Constituent	low- or mid-	Cylinder#	Exp date	Certified concentration	Units
	H2S			(	81.9	ppm
76-000-087	cos	- low	v CC99928	09/25/13	81.9	ppm
	CS2	] 10W			82.0	ppm
	CH3SH				81.9	ppm
	H2S				180	ppm
76-000-086	COS	- mid	CC20436	07/40/40	180.0	ppm
	CS2 mild CO204	CC20436	07/10/13	180.0	ppm	
	CH3SH				180.0	ppm

#### Low-level CGA:

Start time	End time	H2S	cos	CS2	CH3SH
15:49	16:00	84.3	86.3	91.6	86.3
16:00	16:11	84.1	86.5	91.6	87.7
16:11	16:22	84.9	86.8	91.5	87.9
Avera	ige	84.4	86.5	91.6	87.3
Cal gas		81.9	81.9	82.0	81.9
CGA acc	curacy	3.1%	5.7%	11.7%	6.6%

Start time	End time	H2S	cos	CS2	CH3SH
16:22	16:33	175.0	179.0	181.0	181.0
16:33	16:44	178.0	180.0	181.0	181.0
16:44	16:55	179.0	180.0	181.0	181.0
Avera		177.3	179.7	181.0	181.0
Cal gas		180.0	180.0	180.0	180.0
CGA acc	curacy	1.5%	0.2%	0.6%	0.6%

Analyzer: FCC Charge Heater

Analyzer Manufacturer: ABB

Analyzer model #'s: URAS 14 (CO) and Magnos 106 (O2)

Constituents monitored (w/ranges): CO (0-500) and O2 (0-10%)

Date CGA performed:

11/7/2012

Performed by: Doug Pek and Moses Sears

Calibration gases used:

MAP stock #	Constituent	low- or mid-	Cylinder#	Exp date	Certified concentration	Units
76-188-166	CO	low	CC275912	06/28/13	124	ppm
	O2		00210812	00/20/13	5.02	%
76-188-165	CO	- mid	EB0015531	06/27/15	278	ppm
	O2	11114		00/2//15	9.04	%

#### Low-level CGA:

Start time	End time	CO	O2
10:23	10:32	123.8	5 14
10:32	10:41	123.7	5.14
10:41	10:50	123.8	5.14
	rage	124	5.14
	s value	124	5.02
CGA a	curacy	0.2%	2.4%
CGA differe	ence (ppm)	-0.2	0.1

Start time	End time	CO	O2	
11:03 11:12		274.5	9.15	
11:12	11:22	274.6	9.15	
11:22	11:31	274.6	9.15	
Ave		275	9.15	
Cal ga		278	9.04	
CGA ad		1.2%	1.2%	
CGA differen	ence (ppm)	-3.4	0.1	

Analyzer: FCCU Regenerator exhaust CEMS

Analyzer Manufacturer: ABB

Analyzer model #'s: Limas 11 (SO2/NOx), Magnos 106 (O2), Uras 14 (CO/CO2)

Constituents monitored (w/ranges): SO2 (0-200), NOx (0-200), CO (0-1000), CO2 (0-20%), O2 (0-10%)

Date CGA performed: 12/12/2012

Performed by: Doug Pek and Eric Justa

Calibration gases used:

MAP stock #	Constituent	low- or mid-	Cylinder#	Exp date	Certified concentratio	Units
	SO2	low		4/27/13	49.8	ppm
76-200-300	NO	low	CC275896		51.1	ppm
_	CO	low	CC2/3696		248	ppm
	CO2	low			6.61	%
76-188-219	02	low	CC288638	10/20/14	5.52	%
	SO2	mid			110	ppm
76-500-600	NO	mid	Бросовос	La contraction	113	ppm
	CO	mid	EB0028863	6/1/14	543	ppm
	CO2	mid	and the second control of the second control		12.1	%
76-188-215	O2	mid	FRANCIA		8.99	<del>/</del> 6
	NO2	mid	EB0023341	06/24/13	90.9	ppm

#### Low-level CGA:

Start time	End time	SO2	NO	СО	CO2	
20:03	20:19	46.8	51.3	256	6.67	O2 5.62
20:20	20:37	47.5	51.3	256	6.67	5.60
20:37	20:57	47.5	51.2	256	6.67	5.59
AND ASSESSMENT OF THE PROPERTY	rage	47.3	51	256	6.67	5.60
THE RESIDENCE OF THE PARTY OF T	s value	49.8	51.1	248.0	6.61	5.52
CGA ac	ccuracy	5.1%	0.3%	3.2%	0.9%	1.5%

#### Mid-level CGA:

Start time	End time	SO2	NO	CO	CO2	
20:57	21:15	110.5	114.9	544	12.1	<b>O2</b> 9.17
21:15	21:31	109.4	114	545	12.1	9.18
21:32	21:47	109.9	114.2	545	12.1	9.18
	rage	109.9	114	545	12.1	9.18
	s value	110	113.0	543	12.1	8.99
CGA ac	curacy	0.1%	1.2%	0.3%	0.0%	2.1%

CGA\_FCCU.xlsx; 4th2012

Analyzer: GOHT Heater

Analyzer Manufacturer: ABB

Analyzer model #'s: Limas11 (NOx), Uras 26 (CO), and Magnos 106 (O2)

Constituents monitored (w/ranges): NOx (0-100), CO low (0-50), CO high (0-500), and O2 (0-10%)

Date CGA performed:

12/11/2012

Performed by: Glen Senczysztn

Calibration gases used:

MAP stock #	Constituent	low- or mid-	Cylinder#	Exp date	Certified concentration	Units
76-000-074	NO	low	EDOOGGE		25.3	ppm
	CO low	low	EB0026852	06/27/14	12.9	ppm
76-000-069	CO high	low	FDOOLOVO		125.0	ppm
	O2	low	EB0019491	07/06/15	4.96	%
76-000-066	NO	mid			54.2	
	CO low	mid	EB0022445	05/22/14	28.8	ppm
76-188-165	CO high	mid			275	ppm
70-100-100	O2	mid	EB0003827	08/22/13	9.03	ppm %

#### Low-level CGA:

Start time	End time	NO	CO low	CO high	O2
10:58	11:11	25.9	13.09	125	4.96
11:11	11:23	25.6	13.00	125	4.96
11:23	11:35	25.4	13.00	125	4.96
Aver	was the same of th	25.6	13.0	125.0	4.96
Cal gas		25.3	12.9	125.0	4.96
CGA ac	curacy	1.32%	1.01%	0.00%	0.00%

#### Mid-level CGA:

Start time	End time	NO	CO low	CO high	O2
11:45	11:57	54.2	28	274	8.98
11:57	0:09	54.6	27.9	274	8.98
0:10	0:22	54.7	27.9	274	8.98
Aver	Andrew Continues and the Continues of th	54.5	27.9	274.0	9.0
	s value	54.2	28.8	275	9.03
CGA ac	curacy	0.55%	3.01%	0.36%	0.55%

CGA GOHT.xlsx; 4thQ2012

Analyzer: West Plant Fuel Gas

Analyzer Manufacturer: ABB

Analyzer model #'s: 2000GC

H2S (0-300)

Date CGA performed: 12/15/2012

Performed by: Doug Pek and Eric Justa

Calibration gases used:

MAP stock #	Constituent	low- or mid-	Cylinder#	Exp date	Certified concentration	Units
	H2S		CC99928	09/25/13	81.9	ppm
76-000-087	COS	low			81.9	ppm
	CS2				82.0	ppm
	CH3SH				81.9	ppm
	H2S		CC253034	:	180	ppm
76-000-086	COS	mid		07/40/40	180.0	ppm
	CS2	] """	CC203034	07/10/13	180.0	ppm
	CH3SH				180.0	ppm

#### Low-level CGA:

Start time	End time	H2S	cos	CS2	CH3SH
9:47	9:58	86.9	82.3	85.2	83.4
9:58	10:09	86.9	82.1	85.0	83.6
10:09	10:21	87.4	82.2	85.3	83.9
Aver	age	87.1	82.2	85.2	83.6
Cal gas	s value	81.9	81.9	82.0	81.9
CGA ac	curacy	6.3%	0.4%	3.9%	2.1%

Start time	End time	H2S	cos	CS2	CH3SH
10:21	10:32	189.0	183.0	180.0	185.0
10:32	10:42	189.0	183.0	180.0	185.0
10:42	10:54	189.0	183.0	180.0	185.0
Aver	age	189.0	183.0	180.0	185.0
Cal gas	value	180.0	180.0	180.0	180.0
CGA ac	curacy	5.0%	1.7%	0.0%	2.8%

Analyzer: Zurn Boiler

Analyzer Manufacturer: ABB

Analyzer Model Number's: ABB Limas 11 (NOx), ABB Uras 14 (CO), and ABB Magnos 106 (O2)

Serial Number's: 3.341196.1 (NOx), 3.341671.1 (CO), and 3.341670.1 (O2)

Constituents monitored (w/ranges): NOx (0-500), CO high range (0-500), CO low range (0-50) and O2 (0-10%)

Date CGA performed: 12/17/2012

Performed by: Doug Pek

Calibration gases used:

MAP stock #	Constituent	low- or mid-	Cylinder#	Exp date	Certified concentration	Units
76-188-232	NOx		EB0025464	02/02/14	120	ppm
10 100 202	CO high range	lovu	EB0020404	02/02/14	125	ppm
76-188-259	CO low range	low	EDAGGEGG	00/00/4	11.9	ppm
/ U- 100-208	02		EB0033563	09/23/14	5.00	%
76-188-231	NOx		FDOODFOAG	04/07/40	270	ppm
10-100-231	CO high range	الدامس	EB0025213	01/07/13	275	ppm
76-188-269	CO low range	mid	EDAGGGG		28.80	ppm
70-100-208	O2		EB0033318	09/23/14	8.90	%

#### Low-level CGA:

Start time	End time	NOx	CO high range	CO low range	O2
13:09	13:20	117	123.3	12.40	5.00
13:20	13:30	116	123.3	12.20	5.00
13:31	13:41	116	123.3	12.00	5.00
Ave	rage	116	123	12.2	5.00
Cal ga	s value	120	125	11.9	5.00
CGA ad	ccuracy	3.1%	1.4%	2.5%	0.0%

Start time	End time	NOx	CO high range	CO low range	O2
13:48	13:58	265	271.8	26.6	8.90
13:58	14:09	265	271.8	26.8	8.90
14:09	14:20	265	271.8	26.8	8.90
Average		265	272	26.7	8.90
Cal gas value		270	275	28.8	8.90
CGA accuracy		1.9%	1.2%	7.2%	0.0%

# Appendix D

# **Excess Emission Report**

# Excess Emission Report Fourth Quarter 2012 Marathon Petroleum Company LP - Michigan Refining Division Time Periods are Approximate

CRI	Therms	Oxidizer

Start Date/Time*	End Date/Time*	Duration of Excess Emissions (hrs)	Equipment	Emissions (ppm 12 hr ave)**	Cause	Anti-contract	
11/3/12 7:00 PM	11/3/12 8:00 PM		SRU Thermal Oxidizer	266.85	Cause	Corrective Action	
11/3/12 8:00 PM	11/3/12 9:00 PM	i i	SRU Thermal Oxidizer	299,64			
11/3/12 9:00 PM	11/3/12 10:00 PM		SRU Thermal Oxidizer	331.42			
11/3/12 10:00 PM	11/3/12 11:00 PM		SRU Thermal Oxidizer	361,34			
11/3/12 11:00 PM	11/4/12 12:00 AM		SRU Thermal Oxidizer	388,31			
11/4/12 12:00 AM	11/4/12 1:00 AM	<u> </u>	SRU Thermal Oxidizer	404.83			
11/4/12 1:00 AM	11/4/12 2:00 AM		-		During start-up of the refinery from the plant-wide shutdown the sulfur plant operations were interrupted when		
11/4/12 2:00 AM	11/4/12 3:00 AM	<u> </u>	SRU Thermal Oxidizer	418.33	hydrocarbon pressured up the Sour Water Flash Drum sending hydrocarbon to various vessels within the sulfur		
11/4/12 3:00 AM	11/4/12 4:00 AM		SRU Thermal Oxidizer	421.95 415.54	plant. Hydrocarbon and water collected in the flash drum from start-up of the various units, no particular	The startup was performed per procedure.	
11/4/12 4:00 AM	11/4/12 5:00 AM	1	SRU Thermal Oxidizer		source was identified as the major contributor to the incident.		
11/4/12 5:00 AM	11/4/12 6:00 AM	1	SRU Thermal Oxidizer	406,06			
11/4/12 6:00 AM	11/4/12 7:00 AM		SRU Thermal Oxidizer	386.90			
11/4/12 7:00 AM	11/4/12 8:00 AM	i	SRU Thermal Oxidizer	352.37	4		
11/4/12 8:00 AM			SRU Thermal Oxidizer	318.84		·	
11/4/12 9:00 AM	11/4/12 9:00 AM 11/4/12 10:00 AM	1	SRU Thermal Oxidizer	294.70			
11/14/12 1:00 AM			SRU Thermal Oxidizer	268.35			
11/14/12 1:00 AM 11/14/12 2:00 AM	11/14/12 2:00 AM		SRU Thermal Oxidizer	252.95			
11/14/12 2:00 AM	11/14/12 3:00 AM		SRU Thermal Oxidizer	287,53		In response to the incident at the East Plant Sulfur Recove	
11/14/12 4:00 AM	11/14/12 4:00 AM		SRU Thermal Oxidizer	321,23	4	Unit, Operations reduced hydrotreater rates to a minimum	
	11/14/12 5:00 AM	1	SRU Thermal Oxidizer	353,02	·	order to minimize Sulfur Dioxide emissions, and the Diesel a Gasoil Hydrotreaters were placed on internal circulation. Both East Plant Sour Water Strippers A & B were placed o Boiler Feed Water flush to eliminate the Sour Water Acid G load on the East Plant Sulfur Recovery Unit. C Train was placed on hot standby, removing the load from Tail Gas Treater Unit #2. Instrument technicians were called to the Refinery to double check the operation of the Thermal Oxidizer CEMs. The pH probe was fixed.  The amine levels on the old DHT returned to normal levels and the DHT was cut back to minimum charge. The trains	
11/14/12 5:00 AM	11/14/12 6:00 AM	1	SRU Thermal Oxidizer	376.63			
11/14/12 6:00 AM	11/14/12 7:00 AM	1	SRU Thermal Oxidizer	390,50	This was discussed as a contract of the contra		
11/14/12 7:00 AM	11/14/12 8:00 AM	1	SRU Thermal Oxidizer	393.87	This was directly related to a false reading on an instrument. The pH probe to the tail gas unit had plugged		
11/14/12 8:00 AM	11/14/12 9:00 AM	1	SRU Thermal Oxidizer	386.77	which prevented the signs of breakthrough from being observed by the operators.		
11/14/12 9:00 AM	11/14/12 10:00 AM	1	SRU Thermal Oxidizer	367,63			
11/14/12 10:00 AM	11/14/12 11:00 AM	1	SRU Thermal Oxidizer	351.54			
11/14/12 11:00 AM	11/14/12 12:00 PM		SRU Thermal Oxidizer	331.15			
11/14/12 12:00 PM	11/14/12 1:00 PM	1	SRU Thermal Oxidizer	301.65			
11/14/12 1:00 PM	11/14/12 2:00 PM	1	SRU Thermal Oxidizer	273,76			
11/21/12 7:00 PM	11/21/12 8:00 PM	1	SRU Thermal Oxidizer	270.36			
11/21/12 8:00 PM	11/21/12 9:00 PM	1	SRU Thermal Oxidizer	300.68			
11/21/12 9:00 PM	11/21/12 10:00 PM	1	SRU Thermal Oxidizer	335.73			
11/21/12 10:00 PM	11/21/12 11:00 PM	1	SRU Thermal Oxidizer	370.89	This incident was a result of the post DHOUP plant configuration. The refinery's GOHT Amine and West Plant		
11/21/12 11:00 PM	11/22/12 12:00 AM	1	SRU Thermal Oxidizer	404,44	Acid Gas systems are now piped to the new North Plant (DHOUP) Sulfur Unit. The DHT Amine is directed to		
11/22/12 12:00 AM	11/22/12 1:00 AM	ı	SRU Thermal Oxidizer	438,02	the EP Sulfur Unit. Shortly after start-up, the waste heat steam generator servicing the new North Plant		
11/22/12 1:00 AM	11/22/12 2:00 AM	1	SRU Thermal Oxidizer	467.94	Incinerator developed a hole that required immediate maintenance attention. As such, temporary lines were		
11/22/12 2:00 AM	11/22/12 3:00 AM	1	SRU Thermal Oxidizer	478.69	placed into service to allow acid gas and amine to be treated through the East Plant instead of shutting down		
11/22/12 3:00 AM	11/22/12 4:00 AM	1	SRU Thermal Oxidizer	459.92	multiple units. Upon switching the amines back, after the repair was completed, the difference in operating		
11/22/12 4:00 AM	11/22/12 5:00 AM	The state of the s	SRU Thermal Oxidizer	438.38	pressure between the amine systems caused amine to fill up the EP Amine and Acid Gas systems causing an	were brought back to normal acid gas to air ratios as needed	
11/22/12 5:00 AM	11/22/12 6:00 AM		SRU Thermal Oxidizer	438.38	entire shutdown of the EP Sulfur Unit. It should be noted that units were at minimum in anticipation of the	and the TGTUs were restarted and acid gas diverted out of	
11/22/12 6:00 AM	11/22/12 7:00 AM		SRU Thermal Oxidizer	386,34	switch. This event only occurred because of the amine switch that was required to fix the faulty new DHOUP	incinerator back to TGTUs.	
11/22/12 7:00 AM	11/22/12 8:00 AM		SRU Thermal Oxidizer	358.51	equipment. Had the refinery not designed and installed piping to tie these units together there would have been		
The second distriction of the second district	11/22/12 9:00 AM				multiple unit chutdowns in and the tree treese units together there would have been		
	11/22/12 10:00 AM		SRU Thermal Oxidizer	332.97	multiple unit shutdowns in order to complete the repair.		
	11/22/12 11:00 AM		SRU Thermal Oxidizer	303.07			
12/9/12 7:00 PM		ACTION AND DESCRIPTION OF THE PERSON	SRU Thormal Oxidizer	271.89			
12/9/12 8:00 PM	12/9/12 8:00 PM 12/9/12 9:00 PM		SRU Thermal Oxidizer	275.46			
12/9/12 9:00 PM			SRU Thermal Oxidizer	305.63		***************************************	
ALTERNATION OF THE PARTY OF THE	12/9/12 10:00 PM		SRU Thermal Oxidizer	329.90			
	12/9/12 11:00 PM		SRU Thermal Oxidizer	341,72	On 12/00/12 through 12/10/12 the sunitar and a sunitar and	In response to the incident at the East Plant Sulfur Recover	
The second secon	12/10/12 12:00 AM		SRU Thermal Oxidizer	344.93	On 12/09/12 through 12/10/12 the amine stripper overhead receiver level went high causing the knock out drum		
And in case of the last of the	12/10/12 1:00 AM	The second secon	SRU Thermal Oxidizer	323,47	level to go high tripping the A and B trains and Tail Gas 1. This resulted in high SO2 at the East Plant Sulfur	Unit, Operations reduced the distillate hydrotreater rates an	
And the second named to the second	12/10/12 2:00 AM		SRU Thermal Oxidizer	304.10	Recovery Unit (SRU).	restarted the units in order to minimize Sulfur Dioxide	
12/10/12 2:00 AM	12/10/12 3:00 AM		SRU Thermal Oxidizer	286.58		emissions.	
						A Control of Control	
12/10/12 3:00 AM	12/10/12 4:00 AM 12/10/12 5:00 AM	1	SRU Thermal Oxidizer	253,14	· ·		

Total 54 hrs
Operating Hours 1789
% Excess Emissions 3.02

\*The start time and end time are approximate.
\*\*Emission limit is 250 ppm SO2 (12 hour average)

#### Excess Emission Report Fourth Quarter 2012 arathon Petroleum Company LP - Michigan Refining

Marathon Petroleum Company LP - Michigan Refining Division Time Periods are Approximate

Reg	pners	tari	റ

Start Date/Time*	End Date/Time*	Duration of Excess Emissions (hrs)	Equipment	Emissions (ppm 1 hr ave)**		
10/31/12 5:00 AM	10/31/12 6:00 AM	1	FCCU Regenerator	645,87	Cause	Corrective Action
10/31/12 6:00 AM	10/31/12 7:00 AM	l i	FCCU Regenerator	941.72		
10/31/12 7:00 AM	10/31/12 8:00 AM	i i	FCCU Regenerator	1078.90		
10/31/12 8:00 AM	10/31/12 9:00 AM	l i	FCCU Regenerator	1478.27		
10/31/12 9:00 AM	10/31/12 10:00 AM	i	FCCU Regenerator	1279.70	<b></b>	
10/31/12 10:00 AM	10/31/12 11:00 AM	I	FCCU Regenerator	1134.61		
10/31/12 11:00 AM	10/31/12 12:00 PM	i	FCCU Regenerator	614.57	<b></b>	
10/31/12 12:00 PM	10/31/12 1:00 PM	ì	FCCU Regenerator	1096.70		
10/31/12 1:00 PM	10/31/12 2:00 PM	i	FCCU Regenerator	682.09		
10/31/12 2:00 PM	10/31/12 3:00 PM	1	FCCU Regenerator	918.37	4	
10/31/12 10:00 PM	10/31/12 11:00 PM		FCCU Regenerator	1060.61	<u> </u>	
10/31/12 11:00 PM	10/31/12 12:00 AM	1	FCCU Regenerator	1325.28		
11/1/12 12:00 AM	11/1/12 1:00 AM	ı	FCCU Regenerator	1000.00		
11/1/12 1:00 AM	11/1/12 2:00 AM	ī	FCCU Regenerator	1000,00		RANGO DE LA CONTRACTOR DE
11/1/12 2:00 AM	11/1/12 3:00 AM	1	FCCU Regenerator	1000.00	<del>-</del>	To a contract of the contract
11/1/12 3:00 AM	11/1/12 4:00 AM	1	FCCU Regenerator	1188.23		
11/1/12 4:00 AM	11/1/12 5:00 AM	I	FCCU Regenerator	1038.51	<b></b>	:
11/1/12 5:00 AM	11/1/12 6:00 AM	1	FCCU Regenerator	1255.39		
11/1/12 6:00 AM	11/1/12 7:00 AM	1	FCCU Regenerator	1381.18		
11/1/12 7:00 AM	11/1/12 8:00 AM	1	FCCU Regenerator	1094.08	•	99 000
11/1/12 8:00 AM	11/1/12 9:00 AM	1	FCCU Regenerator	1000.00	<u>.</u>	
11/1/12 9:00 AM	11/1/12 10:00 AM	1	FCCU Regenerator	1307.31		The startup was performed now and an arrangement
1/1/12 10:00 AM	11/1/12 11:00 AM	I I	FCCU Regenerator	1620.07	The refinery was started up following a planned plant-wide	
1/1/12 11:00 AM	11/1/12 12:00 PM	1 1	FCCU Regenerator	1478.52	maintenance outage. The Fluidized Catalytic Cracking	
11/1/12 12:00 PM	11/1/12 1:00 PM	1	FCCU Regenerator	1736.75	(FCC) Unit was started up, per procedure, and the following	
11/1/12 1:00 PM	11/1/12 2:00 PM	1	FCCU Regenerator	1260.14	unavoidable excess emissions resulted. Start-up was delayed	The startup was performed per procedure. The leaking is
11/1/12 2:00 PM	11/1/12 3:00 PM	1	FCCU Regenerator	1226.51	during this time period when a pinhole leak was descovered	was repaired and start-up was continued.
11/1/12 3:00 PM	11/1/12 4:00 PM	I	FCCU Regenerator	1202.60	in a line.	
11/1/12 4:00 PM	11/1/12 5:00 PM	I	FCCU Regenerator	1213.87		
11/1/12 5:00 PM	11/1/12 6:00 PM	1	FCCU Regenerator	901.16		
11/1/12 9:00 PM	11/1/12 10:00 PM	1 1	FCCU Regenerator	864.79		
1/1/12 10:00 PM	11/1/12 11:00 PM		FCCU Regenerator	713.16		
11/2/12 3:00 AM	11/2/12 4:00 AM	ī	FCCU Regenerator	1042.00	and the second s	
11/2/12 4:00 AM	11/2/12 5:00 AM	1	FCCU Regenerator	1624.42		
1/2/12 5:00 AM	11/2/12 6:00 AM	ī	FCCU Regenerator	1579.18	Anna anna anna anna anna anna anna anna	
1/2/12 6:00 AM	11/2/12 7:00 AM	1 1	FCCU Regenerator	1114.56		
1/2/12 7:00 AM	11/2/12 8:00 AM	1	FCCU Regenerator	1146.43		
1/2/12 8:00 AM	11/2/12 9:00 AM	ı	FCCU Regenerator	1341.67		
1/2/12 9:00 AM	11/2/12 10:00 AM	i	FCCU Regenerator	592.64		
/2/12 10:00 AM	11/2/12 11:00 AM	1	FCCU Regenerator	685.96		
/2/12 11:00 AM	11/2/12 12:00 PM	1	FCCU Regenerator	1503.58		
/2/12 12:00 PM	11/2/12 1:00 PM	i	FCCU Regenerator	1260.64	,	
1/2/12 1:00 PM	11/2/12 2:00 PM	i	FCCU Regenerator	1677.91		
1/2/12 2:00 PM	11/2/12 3:00 PM	i	FCCU Regenerator			
1/2/12 3:00 PM	11/2/12 4:00 PM	i	FCCU Regenerator	1431.39 536.48	:	
1/2/12 4:00 PM	11/2/12 5:00 PM	i l	FCCU Regenerator			
1/2/12 5:00 PM	11/2/12 6:00 PM			1314,47		
1/2/12 6:00 PM	11/2/12 7:00 PM		FCCU Regenerator	1363.31	· www.	
1/2/12 7:00 PM	11/2/12 8:00 PM		FCCU Regenerator	1061.48		
	1112/12 0.00 P/M	1 1	FCCU Regenerator	688.84	<b></b>	

CEMS\_ExcessEmission\_Report\_Q4\_2012.xlsx

# Excess Emission Report Fourth Quarter 2012 Marathon Petroleum Company LP - Michigan Refining Division Time Periods are Approximate

FCCU Regenerator CO

Start Date/Time*	End Date/Time*	Duration of Excess Emissions (hrs)	Equipment	Emissions (ppm 1 hr ave)**	Cause	Corrective Action
11/2/12 8:00 PM	11/2/12 9:00 PM	I	FCCU Regenerator	910.65		Corrective Action
11/2/12 10:00 PM	11/2/12 11:00 PM	1	FCCU Regenerator	897.36		
11/2/12 11:00 PM	11/3/12 12:00 AM	1	FCCU Regenerator	922,46		
11/3/12 12:00 AM	11/3/12 1:00 AM	1	FCCU Regenerator	507.63		
11/3/12 1:00 AM	11/3/12 2:00 AM	1	FCCU Regenerator	1054.00		
11/3/12 2:00 AM	11/3/12 3:00 AM	1	FCCU Regenerator	611.76	1	The startup was performed per procedure.
11/3/12 3:00 AM	11/3/12 4:00 AM	1	FCCU Regenerator	1000.00		
11/3/12 4:00 AM	11/3/12 5:00 AM	1	FCCU Regenerator	705,41	<b>1</b> ,	
11/3/12 5:00 AM	11/3/12 6:00 AM	1	FCCU Regenerator	1032.89	The refinery was started up following a planned plant-wide	
11/3/12 7:00 AM	11/3/12 8:00 AM	1	FCCU Regenerator	860.59	maintenance outage. The Fluidized Catalytic Cracking	
11/3/12 9:00 AM	11/3/12/10:00 AM	1	FCCU Regenerator	583.63	(FCC) Unit was started up, per procedure, and the following	
11/3/12 4:00 PM	11/3/12 5:00 PM	1	FCCU Regenerator	551.55	unavoidable excess emissions resulted. Start-up was delayed	
11/3/12 9:00 PM	11/3/12 10:00 PM		FCCU Regenerator	857.79	during this time period when a pinhole leak was descovered	
11/3/12 11:00 PM	11/4/12 12:00 AM	ı	FCCU Regenerator	501.04	in a line.	
11/4/12 12:00 AM	11/4/12 1:00 AM	1	FCCU Regenerator	630.82	in a nate	
11/4/12 1:00 AM	11/4/12 2:00 AM		FCCU Regenerator	693,09		
11/4/12 2:00 AM	11/4/12 3:00 AM		FCCU Regenerator	942.85		
11/4/12 3:00 AM	11/4/12 4:00 AM	1	FCCU Regenerator	963.30		
11/4/12 4:00 AM	11/4/12 5:00 AM	1	FCCU Regenerator	871.64		
11/4/12 5:00 AM	11/4/12 6:00 AM	1	FCCU Regenerator	692,49		
11/4/12 6:00 AM	11/4/12 7:00 AM	1	FCCU Regenerator	864.46		
11/4/12 7:00 AM	11/4/12 8:00 AM Total	ı	FCCU Regenerator	550.97		

Total 71 hrs
Operating Hours 1566.5
% Excess Emissions 4.53

<sup>\*</sup>The start time and end time are approximate.

<sup>&</sup>quot;Emission limit is 500 ppm CO (1 hour average)